Project management maturity: a critical analysis of existing and emergent contributing factors

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AUTHOR'S DECLARATION

I certify that the work in this thesis has not been previously submitted for a degree nor has it been submitted as part of requirements for a degree except as fully acknowledged within the text.

I also certify that this thesis has been written by me. Any help that I have received in my research work and the preparation of the thesis has been acknowledged. In addition, I certify that all information sources and literature used are indicated in the thesis.

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Abstract

This thesis explores the dynamics of a reliable project management capability responsible for undefined projects, and proposes new factors that could influence how project management maturity is determined and modeled. It demonstrates that unique processes and practices—that are not tightly controlled, repeatable and predictable—can contribute to the reliable management of e-Learning projects in a university environment.

A multimethod research design is used with two qualitative methods: textual (document) analysis of industry and organizational maturity models, and a case study of two university offices responsible for e-Learning projects. Model analysis reveals factors used for maturity assessment that are not dependent on process control (for example, culture, customer involvement and values). The output is a conceptual framework reflecting these factors, along with instructional design processes and other properties indicating reliability. Data are collected using this instrument and analyzed to test the validity of its components.

Results indicate multiple processes and practices that enable this project management capability in ways that do not fit the current view of project management maturity. Context-specific values and policies, specialized bodies of knowledge (instructional design), customer involvement, third-party influence, and tacit factors such as trust, morale and creativity. A clear path emerges of an alternative route to project management maturity.

This inquiry underscores the value in questioning a strict definition of ‘maturity’ that relies on the key principle of process control. It challenges the prescriptive orientation of the current generation of project management maturity models that codify (thereby legitimizing) certain processes and practices, leaving little room to appreciate unexpected phenomena that might also be contributing. Further research can build on the typological framework offered here to critically examine other project types with undefined, even contradictory or changeable requirements that require flexible project management capabilities without sacrificing their reliability. Exploration of these environments will create a more inclusive definition of project management maturity, and expand the conditions that lead to ‘mature’ project management capabilities.

This research contributes to this exploration by offering new and specific factors integral to the reliable project management capability associated with managing an e-Learning project, and challenges researchers and practitioners to identify others.

Acknowledgements

"It is how we choose what we do, and how we approach it, that will determine whether the sum of our days adds up to a formless blur, or to something resembling a work of art." (M.Csikszentmihályi 1997, p.13)

I read this quote recently and was struck by its emphasis on two things: a journey and its outcome. Now, I won't claim that this work is one of art, but I can attest to its approach—one that was shaped and supported by many others. They are listed below.

Professors Spike Boydell and Shankar Sankaran are at the top. As individuals, they are exceptional professionals and model academics. Together, their methods, management and research philosophies complement each other in ways that make them a formidable supervisory team. My gratitude to them is only surpassed by my confidence that others will similarly benefit.

Mr. Patrick Healy and Dr. Kaye Remington were pivotal figures along my journey as well. Frankly, I don't think they realize the significance of their contribution. I hope this note helps them do so.

As one can see on the title page, my journey started at the University of Technology, Sydney. Professor Lynn Crawford welcomed me, and for that I thank her.

My journey continued through several universities where staff and faculty assisted me in data collection. I can't mention them by name, but I trust that, after reading this, they'll see themselves in this work and know that I couldn't have done this without them. Thanks enormously to all.

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Dedication

This work is dedicated to two remarkable people.

PJD (SPOY3X) and REW

There are few certainties in this world, and I know that one is that

I could not have gotten to this point without you both.

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List of Abbreviations

Table 1-1: List of abbreviations and their expansions

ADDIE	Assess, Design, Develop, Implement and Evaluate
CMM	Capability Maturity Model
E	Enabler
EWS	Early Warning System
GIS	Geographic Information System
HEI	Higher Education Institution
ICT	Information & Communications Technology
ID	Instructional Designer
MOU	Memorandum of Understanding
MPCS	Multi-dimensional Project Control System
NPD	New Product Development
PMI	Project Management Institute
PMBOK	Project Management Body of Knowledge
O	Observation
OGC	Office of Government Commerce
OPM3	Organizational Project Management Maturity Model
P	Process
PMO	Project Management Office
Pr	Practice
Pt	Property
P3M3	Portfolio, Programme, and Project Management Maturity Model
$(PM)^2$	Project Management Process Maturity Model
Prince2	PRojects IN Controlled Environments (version 2)
PROMMM	Project Management Maturity Model
QMMG	Quality Management Maturity Grid
SEI	Software Engineering Institute
SME	Subject-Matter Expert
SPC	Statistical Process Control
TQM	Total Quality Management
WBS	Work Breakdown Structure